

**CLAIMS**

1. Process to produce a composition containing 5'-ribonucleotides comprising:
  - a) subjecting a microorganism to autolysis under conditions at which a substantial part of the RNA remains in a form degradable into 5'-ribonucleotides and at which a substantial part of the RNA remains associated with the cell wall fraction;
  - b) subjecting the autolysate to solid/liquid separation and recovering the RNA-containing cell wall fraction;
  - c) converting the RNA in the recovered RNA-containing cell wall fraction into 5'-ribonucleotides.
2. Process according to claim 1, comprising:
  - d) separating the fraction containing 5'-ribonucleotides from the cell wall fraction.
3. Process according to claim 1 or 2, wherein autolysis in a) is initiated by damaging and/or partially disrupting the microbial cell walls.
4. Process according to claim 3, wherein damaging and/or partially disrupting the microbial cell walls is performed enzymatically.
5. Process according to any one of claims 1 to 4 wherein in a) at least 50% of the RNA remains in a form degradable into 5'-ribonucleotides, more preferably at least 60%, most preferably at least 70%.
6. Process according to any one of claims 1 to 5, wherein in a) at least 20% of the RNA remains associated with the cell wall fraction, preferably at least 30%, most preferably at least 40%.
7. Process according to any one of claims 1 to 6, wherein in b) the RNA-containing cell wall fraction is recovered by centrifugation or filtration.
8. Process according to any one of claims 1 to 6, wherein in b) the autolysate is subjected to ultrafiltration whereby a mixture of RNA-containing cell wall fraction and RNA derived from the microbial soluble fraction is recovered.
9. Process according to claim 8, wherein in c) the RNA in the recovered mixture of RNA-containing cell wall fraction and recovered RNA derived from the microbial soluble fraction are converted into 5'-ribonucleotides.

10. Process according to any one of claims 1 to 9, wherein in c) the RNA is enzymatically converted into 5'-ribonucleotides, preferably by 5'-Fdase or by 5'-Fdase and deaminase.
- 5 11. Composition containing 5'-ribonucleotides comprising an amount of 5'-ribonucleotides, based on sodium chloride free dry matter of the composition, of at least 15% w/w and less than 55% w/w, preferably of at least 30% w/w and less than 55% w/w, more preferably of at least 40% w/w and less than 55% w/w.
- 10 12. Composition according to claim 11, which comprises a higher amount of 5'-GMP than the sum of the amounts of 5'-AMP and 5'-IMP (based on sodium chloride free dry matter of the composition).
13. Composition according to claims 11 or 12 which further comprises glutamate wherein preferably the ratio of glutamate to 5'-ribonucleotides is at most 0.1, more preferably at most 0.05, most preferably at most 0.01.
- 15 14. The use of a composition according to any one of claims 11 to 13 in food or feed.
15. The use of a composition according to any one of claims 11 to 13 to improve the fat note in the taste and/or in the aroma and/or in the mouthfeel of food with reduced fat or low fat.
- 20 16. The use of a composition according to any one of claims 11 to 13 to mask the side or after taste of an artificial sweetener in food.
17. The use of a composition according to any one of claims 11 to 13, to improve the specific vegetable note and/or fruity note and/or alcoholic note in the taste and/or aroma and/or mouthfeel of a beverage.
- 25 18. The use of a composition according to any one of claims 11 to 13 in the preparation of a yeast extract comprising 5'-ribonucleotides.